

DEFENSE INFORMATION SYSTEMS AGENCY

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NREPLY Joint Interoperability Test Command (JTE)

31 May 12

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Special Interoperability Test Certification of the Cisco Unified Communications Manager Local Session Controller, Version 8.0(2) to include Engineering Special (ES) 9

References: (a) DoD Directive 4630.05, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004

- (b) CJCSI 6212.01E, "Interoperability and Supportability of Information Technology and National Security Systems," 15 December 2008
- (c) through (e), see Enclosure
- 1. References (a) and (b) establish the Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification.
- 2. The Cisco Unified Communications Manager (CUCM), Version 8.0(2), hereinafter referred to as the System Under Test (SUT) is certified for joint use in the Defense Information System Network (DISN) as a Local Session Controller (LSC). The Defense Information Systems Agency (DISA) adjudicated all open non-AS Test Discrepancy Reports (TDRs) to have a minor operational impact. The fielding of the SUT is limited to IP version 4 (IPv4) across the DISN. Intra-enclave use of IPv4 and IPv6 is authorized for use. The certification status of the SUT will be verified during operational deployment. Any new discrepancy noted in the operational environment will be evaluated for impact on the existing certification. These discrepancies will be adjudicated to the satisfaction of DISA via a vendor Plan of Actions and Milestones, which will address all new critical TDRs within 120 days of identification. Testing was conducted using LSC product requirements derived from the Unified Capabilities Requirements (UCR), Reference (c), and LSC test procedures, Reference (d). No other configurations, features, or functions, except those cited within this memorandum, are certified by JITC. This certification expires upon changes that affect interoperability, but no later than 16 September 2013, which is three years from the date of the original Unified Capabilities (UC) Approved Products List (APL) memorandum.
- 3. The extension of this certification is based upon Desktop Review (DTR) 7. The original certification is based on interoperability testing conducted by JITC, review of the vendor's Letters of Compliance (LoC), and DISA Information Assurance (IA) Certification Authority (CA) approval of the IA configuration. Interoperability testing was conducted by JITC, Fort Huachuca, Arizona, from 28 June 2010 through 20 August 2010 and documented in Reference (e). Review of the vendor's LoC was completed on 21 September 2010. The DISA CA has reviewed the IA Assessment Report for the SUT, Reference (f), and based on the findings in the

report has provided a positive recommendation. The acquiring agency or site will be responsible for the DoD Information Assurance Certification and Accreditation Process (DIACAP) accreditation. The JITC certifies the SUT as meeting the UCR for LSC requirements. This DTR was requested to include ES 9. This release includes minor software changes related to commercial functionality and doesn't affect Assured Services. Therefore, JITC approves this DTR. The IA posture has not changed. The original IA approval applies to this DTR.

4. The interface, Capability Requirements (CR) and Functional Requirements (FR), and component status of the SUT is listed in Tables 1 and 2. The threshold Capability/Functional requirements for LSCs are established by Sections 5.3.2, 5.3.4, 5.3.5, and 5.4 of Reference (c) and were used to evaluate the interoperability of the SUT.

Table 1. SUT Interface Interoperability Status

Interface	Critical	UCR	Threshold CR/FR ¹	Status	Remarks ²
		Reference	T * T . 4		
			Line Interfaces	Ī	M
10Base-X	Yes	5.3.2.6.3	2, 4, 10, 13, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3i and 802.3j. Applies to PEIs and softphones.
100Base-X	Yes	5.3.2.6.3	2, 4, 10, 13, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3u. Applies to PEIs and softphones.
1000Base-X	No	5.3.2.6.3	2, 4, 10,13, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3ab. Applies to PEIs and softphones.
2-wire analog	Yes	5.3.2.6.1.6	2, 4, 10, and 13	Certified	Met threshold CRs/FRs for 2-wire instruments. Applies to 2-wire secure and non-secure analog instruments. Requirement met through use of an IAD integrated in the MG that supports IEEE 802.3i, 802.3u, and 802.3ab ³
BRI	No	5.3.2.6.1.8	2, 4, 10, and 13	Not Tested	This interface is offered by the SUT but was not tested because it does not support Assured Services.
			External Interfaces		
10Base-X	No^4	5.3.2.4.2	1, 2, 3, 6, 7, 8, 10, 11, 13, 15, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3i and 802.3j. Applies to AS-SIP trunk.
100Base-X	No^4	5.3.2.4.2	1, 2, 3, 6, 7, 8, 10, 11, 13, 15, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3u. Applies to AS-SIP trunk.
1000Base-X	No^4	5.3.2.4.2	1, 2, 3, 6, 7, 8, 10, 11, 13, 15, and 16	Certified	Met threshold CRs/FRs for IEEE 802.3z and 802.3ab. Applies to AS-SIP trunk.
ISDN T1 PRI ANSI T1.619a	Yes	5.3.2.4.3	2, 3, 7, 8, 10, and 13	Certified	Met threshold CRs/FRs. Provides legacy DSN and TELEPORT connectivity.
ISDN T1 PRI NI-2	Yes	5.3.2.4.3	2, 3, 7, 8, 10, and 13	Certified	Met threshold CRs/FRs. Provides PSTN Connectivity
T1 CCS7 ANSI T1.619a	No	5.3.2.12.9	2, 3, 7, 8, 10, and 13	Not Tested	This interface is not offered by the SUT.
T1 CAS	No	5.3.2.12.11	2, 3, 7, 8, 10, and 13	Not Certified	This interface is offered by the SUT but was not certified because of known discrepancies ⁵
E1 PRI ITU-T Q.955.3	No ⁶	5.3.2.12.10	2, 3, 7, 8, 10, and 13	Certified	Tested under PBX1 configuration. Results applicable to LSC.
E1 PRI ITU-T Q.931	No ⁶	5.3.2.12.10	2, 3, 7, 8, 10, and 13	Certified	Conditionally required for European PSTN connectivity.

Table 1. SUT Interface Interoperability Status (continued)

Interface	Critical	UCR Reference	Threshold CR/FR ¹	Status	Remarks ²
			NM		
10Base-X	No ⁴	5.3.2.4.4 5.3.2.7.2.8	16 and 17	Certified	Met threshold CRs/FRs. Verified via LoC.
100Base-X	No ⁴	5.3.2.4.4 5.3.2.7.2.8	16 and 17	Certified	Met threshold CRs/FRs. Verified via LoC.

NOTES:

- 1. The CR/FR requirements are contained in Table 2. The CR/FR numbers represent a roll-up of UCR requirements. Reference (e), Enclosure 3 provides a list of more detailed requirements LSC products.
- 2. Reference (e), Enclosure 2, paragraph 11, provides detailed information pertaining to open TDRs and associated operational impacts.
- 3. Voice calls from the SUT gateway analog interfaces via the UC DISN WAN require a loopback configuration of ANSI T1.619a ISDN PRI interfaces within each gateway (refer to Cisco CUCM deployment guide). This configuration requires translations in the gateways to route all out going analog calls placed towards the UC DISN WAN via the looped T1s. Additionally, incoming calls from the UC DISN WAN to analog end instruments on each gateway must be routed via the looped T1s. Without this configuration, analog end instruments cannot place calls via the UC DISN WAN. This configuration requires two looped ISDN PRI ANSI T1.619a T1s within each 3845 and 3945 gateways and will support a maximum of 69 analog interfaces per gateway. This allows for up to two ISDN PRI T1 interfaces or one ISDN PRI E1 interface for timing/network access. In addition, each 2851 and 2951 gateway requires one looped ANSI T1.619a ISDN PRI within each 2851 and 2951 gateway and will support a maximum of 23 analog interfaces per gateway. Both gateways also require a T1 or E1 interface for synchronization via recovered timing.
- 4. Must provide a minimum of one of the listed interfaces.
- 5. The SUT CAS interface had interoperability test discrepancies adjudicated to be critical for certification of this interface.
- 6. The interface is conditionally required for deployment in Europe.

LEGEND.			
10Base-X	10 Mbps Ethernet	ITU-T	International Telecommunication Union -
100Base-X	100 Mbps Ethernet		Telecommunication Standardization Sector
1000Base-X	1000 Mbps Ethernet	LoC	Letter of Compliance
802.3ab	1000 Mbps Ethernet over Twisted Pair	LSC	Local Session Controller
802.3i	10 Mbps twisted pair media for 10Base-X networks	Mbps	Megabits per second
802.3j	10 Mbps fiber media for 10Base-X networks	MG	Media Gateway
802.3u	100BASE-TX, 100BASE-T4, 100BASE-FX Fast Ethernet	MLPP	Multi-Level Precedence and Preemption
	at 100 Mbps with auto negotiation	NA	Not Applicable
802.3z	Standard for Gigabit Ethernet	NI-2	National ISDN Standard 2
ANSI	American National Standards Institute	NM	Network Management
AS-SIP	Assured Services Session Initiation Protocol	PBX	Private Branch Exchange
BRI	Basic Rate Interface	PEI	Proprietary End Instrument
CAS	Channel Associated Signaling	PRI	Primary Rate Interface
CCS7	Common Channel Signaling	PSTN	Public Switched Telephone Network
CR	Capability Requirement	SS7	Signaling System 7
CUCM	Cisco Unified Communications Manager	SUT	System Under Test
DISN	Defense Information System Network	T1	Digital Transmission Link Level 1 (1.544 Mbps)
DSN	Defense Switched Network	T1.619a	SS7 and ISDN MLPP Signaling Standard for T1
E1	European Basic Multiplex Rate (2.048 Mbps)	TDRs	Test Discrepancy Reports
FR	Functional Requirement	UC	Unified Capabilities
IAD	Integrated Access device	UCR	Unified Capabilities Requirements
IEEE	Institute of Electrical and Electronics Engineers, Inc.	WAN	Wide Area Network
ISDN	Integrated Services Digital Network		

Table 2. SUT CR and FR Status

CR/FR ID	Capability/ Function	Applicability ¹	UCR Reference	Status	Remarks
	Assured Services Product Features and Capal	oilities			
	DSCP Packet Marking	Required	5.3.2.2.1.4	Met	
	Voice Features and Capabilities	Required	5.3.2.2.2.1	Partially Met ²	
1	Public Safety Features	Required	5.3.2.2.2.2	Met	
	ASAC – Open Loop	Required	5.3.2.2.2.3	Met	
	Signaling Protocols	Required	5.3.2.2.2.3	Met	
	Signaling Performance	Required	5.3.2.2.2.4	Met	
	Registration, Authentication, and Failover				
2	Registration	Required	5.3.2.3.1	Met	
	Failover	Required	5.3.2.3.2	Met	
	Product Physical, Quality, and Environmental	l Factors			
	Availability	Required	5.3.2.5.2.1	Partially Met ³	
3	Maximum Downtimes	Required	5.3.2.5.2.2	Met	
	Loss of Packets	Required ⁴	5.3.2.5.4	Met	
	Voice End Instruments				
	Tones and Announcements	Required	5.3.2.6.1.1	Partially Met ^{2,5}	
	Audio Codecs	Required	5.3.2.6.1.2	Partially Met ⁵	
	VoIP PEI or AEI Audio Performance Requirements	Required	5.3.2.6.1.3	Partially Met ⁵	
4	VoIP Sampling Standard	Required	5.3.2.6.1.4	Partially Met ⁵	
	Authentication to LSC	Required	5.3.2.6.1.5	Partially Met ⁵	
	Analog Telephone Support	Required ⁶	5.3.2.6.1.6	Partially Met ⁷	
	Softphones	Conditional	5.3.2.6.1.7	Met ⁸	
	ISDN BRI	Conditional	5.3.2.6.1.8	Not Tested	
	Video End Instruments				
	Video End Instrument	Required	5.3.2.6.2	Not Tested ⁸	
5	Display Messages, Tones, and Announcements	Required	5.3.2.6.2.1	Not Tested ⁸	
	Video Codecs (Including Associated Audio Codecs)	Required	5.3.2.6.2.2	Not Tested ⁸	
	LSC Requirements	D : 1	522521	7.6	
6	PBAS/ASAC Requirements	Required	5.3.2.7.2.1	Met	
	Calling Number Delivery Requirements	Required	5.3.2.7.2.2	Met	
	LSC Signaling Requirements	Required	5.3.2.7.2.3	Met	
	Service Requirements under Total Loss of WAN Transport	Required	5.3.2.7.2.4	Met	
· ·	Local Location Server and Directory	Required	5.3.2.7.2.5	Met	
	LSC Transport Interface Functions	Required	5.3.2.7.2.7	Met	
	LSC to PEI, AEI, and Operator Console Status Verification	Required	5.3.2.7.2.10	Partially Met ⁹	
	Line-Side Custom Features Interference	Conditional	5.3.2.7.2.11	Met	
	Loop Avoidance	Required ⁴	5.3.2.7.3	Met	

Table 2. SUT CR and FR Status (continued)

CR/FR ID	Capability/ Function	Applicability ¹	UCR Reference	Status	Remarks
	Call Connection Agent Requirements				
	CCA IWF Component	Required ¹⁰	5.3.2.9.2.1	Met ¹¹	
	CCA MGC Component	Required ¹⁰	5.3.2.9.2.2	Met	
	SG Component	Conditional	5.3.2.9.2.3	Not Tested ¹¹	
	CCA-IWF Support for AS-SIP	Required	5.3.2.9.5.1	Met	
	CCA-IWF Support for SS7	Conditional	5.3.2.9.5.2	Not Tested ¹¹	
	CCA-IWF Support for PRI via MG	Required	5.3.2.9.5.3	Met	
	CCA-IWF Support for CAS Trunks via MG	Conditional	5.3.2.9.5.4	Not Tested ¹¹	
	CCA-IWF Support for PEI and AEI Signaling Protocols	Required	5.3.2.9.5.5	Partially Met ¹²	
7	CCA-IWF Support for VoIP and TDM Protocol Interworking	Required ¹⁰	5.3.2.9.5.6	Met ¹¹	
	CCA Preservation of Call Ringing State during Failure Conditions	Required ⁴	5.3.2.9.6	Met	
	CCA Interactions with Transport Interface Functions	Required	5.3.2.10.3	Met	
	CCA Interactions with the EBC	Required	5.3.2.10.4	Met	
	CCA Support for Admission Control	Required	5.3.2.10.5	Met	
	CCA Support for UFS	Required	5.3.2.10.6	Met	
	CCA Support for IA	Required	5.3.2.10.7	Met	
	CCA Interaction with EIs	Required	5.3.2.10.10	Partially Met ⁵	
	CCA Support for AS Voice and Video	Required	5.3.2.10.11	Partially Met ⁸	
	CCA Interactions with Service control Functions	Required	5.3.2.10.12	Met	
	CCA Interworking between AS-SIP and SS7	Conditional	5.3.2.11	Not Tested ¹¹	
	MG Requirements				
	Role of MG In LSC	Required	5.3.2.12.3.1	Met	
	MG Support for ASAC	Required	5.3.2.12.4.1	Met	
	MG and IA Functions	Required	5.3.2.12.4.2	Met	
	MG Interaction with Service Control Function	Required	5.3.2.12.4.3	Met	
	MG Interactions with IP Transport Interface Functions	Required	5.3.2.12.4.4	Met	
	MG-EBC interactions	Required	5.3.2.12.4.5	Met	
0	MG IP-Based PSTN Interface Requirements	Conditional	5.3.2.12.4.7	Not Tested	
8	MG Interaction with EIs	Required	5.3.2.12.4.8	Met ⁵	
	MG support for User Features and Services	Required	5.3.2.12.4.9	Met	
	MG Interface to TDM	Required	5.3.2.12.5	Met ^{10,11}	
	MG Interface to TDM Allied and Coalition	Conditional	5.3.2.12.6	Not Tested	
	MG Interface to TDM PSTN in US	Required	5.3.2.12.7	Met ¹⁰	
	MG Interfaces to TDM PSTN OCONUS	Required	5.3.2.12.8	Partially Met ¹⁰	
	MG Support for CCS7	Conditional	5.3.2.12.9	Not Tested ¹¹	
	MG Support for ISDN PRI Trunks	Required	5.3.2.12.10	Met	

Table 2. SUT CR and FR Status (continued)

CR/FR ID	Capability/ Function	Applicability ¹	UCR Reference	Status	Remarks
	MG Requirements (continued)				
	MG Support for CAS Trunks	Required	5.3.2.12.11	Not Tested ¹¹	
	MG requirements for VoIP Internal Interfaces	Required	5.3.2.12.12	Met	
	MG Echo Cancellation	Required	5.3.2.12.13	Met	
8	MG Clock Timing	Required	5.3.2.12.14	Met	
	MGC-MG CCA Functions	Required	5.3.2.12.15	Met	
	MG V.150.1	Required	5.3.2.12.16	Not tested ⁷	
	MG Preservation of Call Ringing during Failure	Required ⁴	5.3.2.12.17	Met	
	SG Requirements	*			
9	SG and CCS7 Network Interactions	Conditional	5.3.2.13.5.1	Not Tested ¹¹	
9	SG Interactions with CCA	Conditional	5.3.2.13.5.2	Not Tested ¹¹	
	SG Interworking Functions	Conditional	5.3.2.13.5.3	Not Tested ¹¹	
	WWNDP Requirements	Conditional	0.0.2.10.0.0	1100 10000	
10	WWNDP	Required	5.3.2.16	Met	
	DSN WWNDP	Required	5.3.2.16.1	Met	
11	Commercial Cost Avoidance	•			
11	Commercial Cost Avoidance	Required ³	5.3.2.23	Not Tested	
12	AS-SIP Based for External Devices (Voicemail, Un	0 0,			
12	AS-SIP Requirements for External Interfaces	Conditional	5.3.2.24	Not Tested	
13	Precedence Call Diversion				T
	Precedence call Diversion	Required	5.3.2.25	Met	
14	Attendant Station Features	p : 13	5 2 2 2 6 1	N . T . 13	
	Precedence and Preemption	Required ³	5.3.2.26.1	Not Tested ¹³	
	Call Display	Required ³	5.3.2.26.2	Not Tested ¹³	
	Class of Service Override	Required ³	5.3.2.26.3	Not Tested ¹³	
	Busy Override and Busy Verification	Required ³	5.3.2.26.4	Not Tested ¹³	
	Night service	Required ³	5.3.2.26.5	Not Tested ¹³	
	Automatic Recall of Attendant	Required ³	5.3.2.26.6	Not Tested ¹³	
	Calls in Queue to the Attendant	Required ³	5.3.2.26.7	Not Tested ¹³	
	AS-SIP Requirements				T T
	SIP Requirements for AS-SIP Signaling Appliances and AS-SIP EIs	Required ³	5.3.4.7	Not Tested	
	SIP Session Keep-Alive Timer	Required	5.3.4.8	Met	
	Session Description Protocol	Required	5.3.4.9	Met	
17	Precedence and Preemption	Required	5.3.4.10	Met	
15	Video Telephony – General Rules	Required	5.3.4.12	Not Tested ⁸	
	Calling Services	Required	5.3.4.13	Met	
	SIP Translation Requirements for Inter-working AS-SIP Signaling Appliances	Required	5.3.4.14	Met	
	Relevant Timers for the Terminating Gateway and the Originating Gateway	Required	5.3.4.15	Met	

Table 2. SUT CR and FRs Status (continued)

CR/FR ID	Capability/ Function	Applicability ¹	UCR Reference	Status	Remarks
	AS-SIP Requirements (continued)				
	SIP Requirements for Interworking AS-SIP Signaling Appliances	Required	5.3.4.16	Met	
15	Keep-Alive Timer Requirements for Interworking AS-SIP Signaling Appliances	Required	5.3.4.17	Met	
	Precedence and Preemption Extensions for Interworking AS-SIP Signaling Appliances	Required	5.3.4.18	Met	
	Supplementary Services	Required	5.3.4.19	Met	
	IPv6 Requirements				
16	Product Requirements	Required	5.3.5.4	Partially met ¹⁴	
	NM				
	LSC Management Function	Required	5.3.2.7.2.6	Met	
	VVoIP NMS Interface Requirements	Required	5.3.2.4.4	Met	
17	General Management requirements	Required	5.3.2.17.2	Partially Met ¹⁵	
	Requirement for FCAPS Management	Required	5.3.2.17.3	Partially Met ¹⁵	
	NM requirements of Appliance Functions	Required	5.3.2.18	Partially Met ¹⁵	
	Accounting Management	Required	5.3.2.19	Partially Met ¹⁶	

NOTES:

- 1. The annotation of 'required' refers to a high-level requirement category. The applicability of each sub-requirement is provided in Reference (e), Enclosure 3.
- 2. The SUT had outstanding open TDRs at the completion of testing adjudicated by DISA to have a minor operational impact. The vendor has submitted a POA&M to address the open TDRs. Reference (e), Enclosure 2, paragraph 11, provides additional details.
- 3. When the SUT fails from the primary processor to backup processor, all active drop after approx 6-8 minutes. DISA adjudicated this TDR as minor with the vendor's submitted POA&M to fix by June 2011.
- 4. This requirement represents a new UCR requirement where the vendor has 18-months (July 2011) to comply.
- 5. The SUT met the requirement for PEIs; the SUT was not tested with generic AEI because no AEI was provided. AEIs are a new UCR 2008, Change 1, requirement; the vendor has 18-months (July 2011) to comply.
- 6. The UCR 2008, Change 1, added the 18-month rule for ITU-T G.711 and ITU-T V.150.1 IAD support.
- 7. The vendor submitted an LoC stating compliance to ITU-T V.150; however, this feature could not be tested because it is not supported by other vendors. This is a new UCR 2008, Change 1, requirement therefore, the vendor has until July 2011 to comply with this requirement.
- 8. The SUT did not demonstrate video requirements (conditional for softphone). The vendor did not provide a PEI video capability. This was adjudicated by DISA to have a low operational impact because of the limited deployment of PEIs with video.
- 9. The SUT partially met PEI requirements (no video). The AEI and Operator Console requirements were not tested; the 18-month rule for complying (July 2011) applies.
- 10. The SUT must meet T1 PRI (T1.619a and NI-2) IWF. The T1 CAS and T1 CCS7 are conditional.
- 11. The SUT met T1/E1 PRI IWF requirements. The T1 CAS is supported but not certified and T1 CCS7 is not supported by the SUT.
- 12. The SUT met PEI CCA-IWF requirements. The AEI CCA-IWF requirements were not tested. The 18-month rule applies to AEIs.
- 13. The Attendant Console requirements are new UCR requirements; 18-month rule applies.
- 14. The vendor submitted an IPv6 LoC with noted discrepancies. Open TDRs were adjudicated by DISA to have a minor operational impact with the vendor submitted POA&M.
- 15. The vendor submitted an NM LoC with noted discrepancies. Open TDRs were adjudicated by DISA to have a minor operational impact with the vendor submitted POA&M.
- 16. The SUT does not comply with the objective requirement for Record Format. Open TDRs were adjudicated by DISA to have a minor operational impact with vendor submitted POA&M.

Table 2. SUT CR and FR Status (continued)

LEGEND			
AEI	AS-SIP End Instrument	LSC	Local Session Controller
AS	Assured Services	Mbps	Megabits per second
AS-SIP	Assured Services Session Initiation Protocol	MG	Media Gateway
BRI	Basic Rate Interface	MGC	Media Gateway Controller
C2	Command and Control	MFSS	Multi-Function Soft Switch
CAS	Channel Associated Signaling	MLPP	Multilevel Precedence and Preemption
CCA	Call Connection Agent	NI-2	National ISDN Standard 2
CR	Capabilities Requirement	NM	Network Management
CCS7	Common Channel Signaling	NMS	Network Management System
DHCP	Dynamic Host Configuration Protocol	OCONUS	Outside the Continental United States
DISA	Defense Information Systems Agency	PBAS	Precedence Based Assured Services
DSCP	Differentiated Services Code Point	PEI	Proprietary End Instrument
DSN	Defense Switched Network	POA&M	Plan of Action and Milestones
EBC	Edge Boarder Controller	PRI	Primary Rate Interface
EI	End Instrument	PSTN	Public Switched Telephone Network
FCAPS	Fault, Configuration, Accounting, Performance and	SG	Signaling Gateway
	Security	SIP	Session Initiation Protocol
FR	Functional Requirement	SS7	Signaling System 7
G.711	Standard for PCM of Voice Frequencies	SUT	System Under Test
IA	Information Assurance	T1	Digital Transmission Link Level 1 (1.544 Mbps)
IAD	Integrated Access Device	T1.619a	SS7 and ISDN MLPP Signaling Standard for T1
IP	Internet Protocol	TDM	Time Division Multiplexing
ID	Identification	TDR	Test Discrepancy Report(s)
ISDN	Integrated Services Digital Network	UCR	Unified Capabilities Requirements
IEEE	Institute of Electrical and Electronics Engineers, Inc.	UFS	User Features and Services
IP	Internet Protocol	U.S.	United States
IPv6	Internet Protocol version 6	VoIP	Voice over Internet Protocol
ITU-T	International Telecommunication Union -	WAN	Wide Area Network
	Telecommunication Standardization Sector	WWNDP	Worldwide Numbering and Dialing Plan
IWF	Interworking Function		
JITC	Joint Interoperability Test Command		
LoC	Letter of Compliance		

5. No detailed test report was developed in accordance with the Program Manager's request. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). STP is accessible by .mil/gov users on the NIPRNet at https://stp.fhu.disa.mil. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at http://jit.fhu.disa.mil (NIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at http://jitc.fhu.disa.mil/tssi. All associated data is available on the Defense Information Systems Agency Unified Capability Coordination Office (UCCO) website located at http://www.disa.mil/ucco/.

6. The JITC point of contact is Mr. Edward Mellon, commercial (520) 538-5159, or DSN 312-879-5159, e-mail address is edward.mellon@disa.mil. JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The UCCO tracking number is 1011801.

FOR THE COMMANDER:

Enclosure a/s

For RICHARD A. MEADOR

Chief

Battlespace Communications Portfolio

Distribution (electronic mail):

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U.S. Coast Guard, CG-64

Defense Intelligence Agency

National Security Agency, DT

Defense Information Systems Agency, TEMC

Office of Assistant Secretary of Defense (NII)/DOD CIO

U.S. Joint Forces Command, Net-Centric Integration, Communication, and Capabilities Division, J68

Defense Information Systems Agency, GS23

ADDITIONAL REFERENCES

- (c) Office of the Assistant Secretary of Defense, "Department of Defense Unified Capabilities Requirements 2008, Change 1," 22 January 2010
- (d) Joint Interoperability Test Command, "Unified Capabilities Test Plan (UCTP)," Draft
- (e) Joint Interoperability Test Command, Memo, JTE, "Special Interoperability Test Certification of the Cisco Unified Communications Manager Local Session Controller, Version 8.0(2)," 23 September 2010
- (f) Joint Interoperability Test Command, "Information Assurance (IA) Assessment of Cisco Unified Communications Manager (CUCM), Version 8.02, (TN 1011801)," Draft